

Appl. No. 10/535,697
Amendment and/or Response
Reply to Office action of 20 December 2006

RECEIVED Page 2 of 10
CENTRAL FAX CENTER

MAR 20 2007

Amendments to the Claims:

A clean version of the entire set of pending claims, including amendments to the claims, is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (CURRENTLY AMENDED) A microcontroller the programming of which is carried out in at least one machine-dependent assembly language in which the assembler commands, with the exception of conditional program branches, are executable essentially independently of data, the microcomputer being adapted to execute a conditional branch instruction,

wherein in case of a fulfilled branch condition, ~~for example, at least one fulfilled status flag, at least one program counter being loadable is loaded~~ with a new address and/or ~~for~~ a new value, and

wherein in case of an unfulfilled branch condition, ~~for example, at least one unfulfilled status flag, the instruction being ended,~~ characterized in that in case of an unfulfilled branch condition the program counter, ~~instead of ending the instruction,~~ is optionally either ended immediately, or the at least one program counter is reloaded with its current address or current value prior to ending the instruction ~~re-loadable with its previous address and/or with its previous value.~~

2. (CURRENTLY AMENDED) A microcontroller as claimed in claim 1, characterized by comprising at least one multiplex unit triggerable by means of the ~~a~~ result of the testing of the branch condition, the ~~input of the program counter~~

wherein in case of a fulfilled branch condition, an input of the at least one program counter is loaded ~~being loadable with the new address and/or~~ the new value, and

Atty. Docket No. DE-020278

Appl. No. 10/535,697
Amendment and/or Response
Reply to Office action of 20 December 2006

Page 3 of 10

wherein in case of an unfulfilled branch condition, the input of the at least one program counter is loaded being loadable with the address or value at the an output of the program counter and/or with the value at the output of the program counter.

3. (CURRENTLY AMENDED) A microcontroller as claimed in claim 1, characterized by its configuration as a smartcard controller including the microcontroller of claim 1.

4. (PREVIOUSLY PRESENTED) An electrical or electronic device controlled by means of at least one microcontroller according to claim 1.

5. (CURRENTLY AMENDED) A method for processing the programming of a microcontroller carried out in at least one machine-dependent assembly language, the assembler commands, with the exception of conditional program branches, being executed essentially independently of data, comprising executing a conditional branch instruction.

wherein in case of a fulfilled branch condition, for example, at least one fulfilled status flag, at least one program counter being is loaded with at least one of a new address and/or with a new value, and

wherein in case of an unfulfilled branch condition, for example, at least one unfulfilled status flag, the instruction being ended,
characterized in that in case of an unfulfilled branch condition the program counter, instead of ending the instruction, is optionally either ended immediately or the at least one program counter is re-loaded with at least one of its previous address and/or with its previous value current address or current value prior to ending the instruction.

6. (CURRENTLY AMENDED) A method as claimed in claim 5, characterized in that wherein in case of a fulfilled branch condition at least one of the new address and/or the new value is supplied to an input of the at least one program counter,

Atty. Docket No. DE-020278

Appl. No. 10/535,697
Amendment and/or Response
Reply to Office action of 20 December 2006

Page 4 of 10

and in case of an unfulfilled branch condition at least one of the address or value at the an output of the program counter and/or the value at the output of the program counter is/are supplied to the input of the at least one program counter.

7. (CURRENTLY AMENDED) A method as claimed in claim 5, characterized ~~in that~~ wherein at least one of testing of the branch condition ~~and/or~~ the loading of the program counter ~~is/are~~ is carried out with complementary data.

8. (CURRENTLY AMENDED) A method as claimed in claim 5, characterized ~~in that~~ wherein in case of an unfulfilled branch condition the option between ending the instruction immediately and re-loading the program counter with its ~~previous~~ at least one of its current address and/or with its previous or its current value is controlled by at least one special bit ~~(so-called "select bit")~~.

9. (CANCELED)

10. (CURRENTLY AMENDED) A method as claimed in claim 8, characterized ~~in that~~ wherein the special bit option can be switched on and off ~~in any desired sequence, for example,~~ by means of at least one random function ~~and/or~~ by means of at least one suitable bit sequence.

11. (NEW) A microcontroller which is programmable in at least one machine-dependent assembly language in which the assembler commands, with the exception of conditional program branches, are executable essentially independently of data, the microcomputer being adapted to execute a conditional branch instruction including a branch address, the microcontroller comprising:

a program counter; and

a multiplexer,

wherein in case of a fulfilled branch condition the multiplexer is controlled to load the branch address into the program counter, and

Atty. Docket No. DE-020278

Appl. No. 10/535,697
Amendment and/or Response
Reply to Office action of 20 December 2006

Page 5 of 10

wherein in case of an unfulfilled branch condition the multiplexer is controlled to reload the program counter with its current address prior to ending the instruction.

Atty. Docket No. **DE-020278**